

Vol. VI

1936

THE
INDIAN JOURNAL
OF
AGRICULTURAL SCIENCE

Issued under the Authority
of
The Imperial Council of Agricultural Research



Annual subscription

Rs. 15 or 24s.

Price per part

Rs. 3 or 5s. 3d.

PUBLISHED BY THE MANAGER OF PUBLICATIONS, DELHI.
PRINTED BY THE MANAGER, GOVERNMENT OF INDIA PRESS, NEW DELHI
1938.

Price annas 6 or 8d.

11 APR 1938

SERIAL
SEPARATE

As. Lec B

List of Agents in India from whom Government of India Publications are available.

(a) PROVINCIAL GOVERNMENT BOOK DEPOTS.

MADRAS:—Superintendent, Government Press, Mount Road, Madras.
BOMBAY:—Superintendent, Government Printing and Stationery, Queen's Road, Bombay.
SIND:—Manager, Sind Government Book Depot and Record Office, Karachi (Sadar).
UNITED PROVINCES:—Superintendent, Printing and Stationery, U. P., Allahabad.
PUNJAB:—Superintendent, Government Printing, Punjab, Lahore.
CENTRAL PROVINCES:—Superintendent, Government Printing, Central Provinces, Nagpur.
ASSAM:—Superintendent, Assam Secretariat Press, Shillong.
BIHAR:—Superintendent, Government Printing, P. O. Gulzarbagh, Patna.
NORTH-WEST FRONTIER PROVINCE:—Manager, Government Printing and Stationery, Peshawar.
ORISSA:—Press Officer, Secretariat, Cuttack.

(b) PRIVATE BOOK-SELLERS.

Advani Brothers, P. O. Box 100, Cawnpore.
Aero Stores, Karachi.*
Banthiya & Co., Ltd., Station Road, Ajmer.
Bengal Flying Club, Dum Dum Cantt.*
Bhatia Book Depot, Saddar Bazar, Ranikhet.
Bhawani & Sons, New Delhi.
Bombay Book Depot, Charni Road, Girgaon, Bombay.
Book Company, Calcutta.
Booklover's Resort, Talkad, Trivandrum, South India.
Burma Book Club, Ltd., Rangoon.
Butterworth & Co. (India), Ltd., Calcutta.
Careers, Mohini Road, Lahore.
Chatterjee & Co., 3, Bacharam Chatterjee Lane, Calcutta.
Chukerverty, Chatterjee & Co., Ltd., 13, College Square, Calcutta.
City Book Club, 98, Phayre Street, Rangoon.
Das Gupta & Co., 54/3, College Street, Calcutta.
Delhi and U. P. Flying Club, Ltd., Delhi.*
English Book Depot, Ferozepore.
English Book Depot, Taj Road, Agra.
English Bookstall, Karachi.
English Book Store, Abbottabad, N.-W. F. P.
Faqir Chand Marwah, Peshawar Cantt.
Fono Book Agency, Simla.
Gautama Brothers & Co., Ltd., Meston Road, Cawnpore.
Higginbothams, Madras.
Hindu Library, 137-F, Balaram De Street, Calcutta.
Hyderabad Book Depot, Chaderghat, Hyderabad (Deccan).
Imperial Book Depot and Press, near Jama Masjid (Machhiwalan), Delhi.
Indian Army Book Depot, Dayalbagh, Agra.
Indian Army Book Depot, Daryaganj, Delhi.
Indian Book Shop, Benares City.
Indian School Supply Depot, Central Avenue, South, P. O. Dharamtala, Calcutta.
Insurance Publicity Co., Ltd., Lahore.
International Book Service, Poona 4.
Jacques & Co., Kamptee Road, Nagpur, Messrs. Neston.
Jaina & Bros., Mori Gate, Delhi and Connaught Place, New Delhi, Messrs. J. M.
Kamala Book Depot, 15, College Square, Calcutta.
Karnataka Publishing House, Bangalore City.
Keale & Co., 65, Britto Road, Karachi Sadar.
Keshao Book Stall, Khadibazar, Belgaum.
Kitabistan, 17-A, City Road, Allahabad.
Krishnaswami & Co., Teppakulam P. O., Trichinopoly Port, Messrs. S.
Lahiri & Co., Calcutta, Messrs. S. K.
Local Self-Govt. Institute, Bombay.
London Book Co. (India), Arbab Road, Peshawar, Murree, Nowshera, Rawalpindi.
Malhotra & Co., Post Box No. 94, Lahore, Messrs. U. P.
Malik & Sons, Sialkot City.
Mathur B. S., Bookseller, Civil Lines, Jodhpur.
Minerva Book Shop, Anarkali Street, Lahore.
Modern Book Depot, Bazar Road, Sialkot Cantt.
Modern Book Depot, Napier Road, Jullundur Cantt.
Mohaulal Dossabhai Shah, Rajkot.
Mohendra Bros., Lashkar, Gwalior State, Messrs.
Nandkisor & Bros., Chowk, Benares City.
New Book Co., "Kitab Mahal", 192, Hornby Road, Bombay.
Newman & Co., Ltd., Calcutta, Messrs. W.
Oxford Book and Stationery Company, Delhi, Lahore, Simla, Meerut and Calcutta.
Parikh & Co., Baroda, Messrs. B.
Pioneer Book Supply Co., 20, Shib Narayan Das Lane, Calcutta and 219, Clot Market, Delhi.
Popular Book Depot, Grant Road, Bombay.
Punjab Religious Book Society, Lahore.
Raghunath Prasad & Sons, Patna City.
Rama Krishna & Sons, Booksellers, Anarkali, Lahore.
Ram Krishna Bros., Opposite Bishrambag, Poona City.
Ram Narain Lal, Katra, Allahabad.
Ramesh Book Depot and Stationery Mart, Kashmir Gate, Delhi.
Ray & Sons, 43, K. & L. Edwardes Road, Rawalpindi, Murree and Peshawar, Messrs. J.
Roy Chowdhury & Co., 72, Harrison Road, Calcutta, Messrs. N. M.
Saraswati, Book Depot, 15, Lady Hardinge Road, New Delhi.
Sargat & Sons, 15, College Square, Calcutta, Messrs. M. C.
Sarkar & Co., Ltd., 18, Shama Charan De Street, and 6, Hastings Street, Calcutta, Messrs. P. C.
Sharada Mandir, Ltd., Nai Sarak, Delhi.
Standard Bookstall, Karachi.
Standard Bookstall, Quetta.
Standard Book Depot, Lahore, Dalsnosie and Delhi.
Standard Law Book Society, 69, Harrison Road, Calcutta.
Tara & Sons, Razmak (India), Messrs. B. S.
Taraporevala Sons & Co., Bombay, Messrs. D. B.
Thacker & Co., Ltd., Bombay.
Thacker, Spink & Co., Ltd., Calcutta and Simla.
Tripathi & Co., Booksellers, Princes Street, Kalbadevi Road, Bombay, Messrs. N. M.
University Book Agency, Kacheri Road, Lahore.
Upper India Publishing House, Ltd., Literature Palace, Ammuddaula Park, Lucknow.
Varadachary & Co., Madras, Messrs. P.
Venkatasubban, A., Law Bookseller, Vellore.
Wheeler & Co., Allahabad, Calcutta and Bombay, Messrs. A. H.
Young Man & Co. (Regd.), Egerton Road, Delhi.

* Agent for publications on Aviation only.

CONTENTS OF VOLUME

PART I (FEBRUARY 1936)

ORIGINAL ARTICLES—

	PAGE
CYTO-GENETIC ANALYSIS OF <i>Saccharum spontaneum</i> L., I.—CHROMOSOME STUDIES IN SOME INDIAN FORMS (WITH PLATES I-V).	E. K. Janaki Ammal . 1
CYTO-GENETIC ANALYSIS OF <i>Saccharum spontaneum</i> L., 2.—A TYPE FROM BURMA (WITH PLATES VI-VIII).	E. K. Janaki Ammal and T. S. N. Singh, B.Sc. 9
SOME NEW SEEDLING DISEASES OF SUGARCANE (WITH PLATES IX-XI).	L. S. Subramaniam . 11
A BIOCHEMICAL STUDY ON THE DECOMPOSITION OF FARMYARD MANURE AND SULPHATE OF AMMONIA IN THE PADDY SOILS OF THE CENTRAL PROVINCES.	B. K. Mukerji, Ph.D., D.Sc. and S. L. Vishnoi, B.Ag. 17
STATISTICAL NOTES FOR AGRICULTURAL WORKERS, No. 16.—A COMPLEX EXPERIMENT ON RICE AT THE CHINSURAH FARM, BENGAL, 1933-34.	Suresh Chandra Chakravertti, Subhendu Sekhar Bose and P. C. Mahalanobis 34
INFLUENCE OF STORAGE ON SOME OF THE FIBRE-PROPERTIES OF DHARWAR COTTON (WITH TWO TEXT-FIGURES).	H. R. Nayak . . 52
VARIATION IN THE FIBRE-PROPERTIES OF SIMILAR STRAINS OF COTTON GROWN IN DIFFERENT TRACTS OF GUJARAT (WITH ONE TEXT-FIGURE).	B. S. Patel, I. A. S. and Srinagabhushana, B.Sc. 63
DISEASES OF <i>Citrus</i> IN THE PUNJAB (WITH PLATES XII-XIX AND ONE TEXT-FIGURE).	H. Chaudhuri . . 72
A NEW VARIETY OF <i>Oidiopsis taurica</i> (WITH PLATE XX AND ONE TEXT-FIGURE).	B. N. Uppal, Ph.D.; M. N. Kamat, M.Sc. and M. K. Patel, Ph.D. 110
MICROSPOROGENESIS IN <i>Crotalaria juncea</i> LINN. (WITH PLATES XXI AND XXII).	I. Bunerji and K. K. Samal 116

RESEARCH NOTE—

EFFECTS OF BROWN RUST ATTACK ON WHEAT	B. P. Pal., M.Sc., Ph.D., F.L.S. 127
---------------------------------------	--------------------------------------

NOTICE—

BIBLIOGRAPHY OF SOIL SCIENCE, FERTILIZERS
AND GENERAL AGRONOMY.

PAGE

129

PART II (APRIL 1936)

ORIGINAL ARTICLES—

STUDIES IN INDIAN PULSES : THE INHERITANCE OF MORPHOLOGICAL CHARACTERS AND OF WILT RESISTANCE IN <i>Rahar</i> (<i>Cajanus indicus</i> SPRENG.) (WITH PLATES XXIII—XXVI).	<i>F. J. F. Shaw, D.Sc.</i> (Lond.) <i>A.R.C.S.,</i> <i>F.L.S., I.A.S.</i>	139
STUDIES ON <i>Schistocerca gregaria</i> FORSK., II. THE BIOLOGY OF THE DESERT LOCUST WITH SPECIAL RELATION TO TEMPERATURE (WITH SIX TEXT-FIGURES).	<i>M. Afzal Husain, M.A.</i> (Cantab.), <i>I. A. S.,</i> and <i>Taskhir Ahmad,</i> <i>B.Sc. (Agri.)</i>	188
STUDIES ON <i>Schistocerca gregaria</i> FORSK., III. WHY LOCUSTS EAT WOOL : A STUDY IN THE HYDROMANIA OF <i>Schistocerca gregaria</i> .	<i>M. Afzal Husain, M.A.</i> (Cantab.), <i>I.A.S. and</i> <i>C. B. Mathur, M.Sc.</i>	263
NITROGEN RECUPERATION IN THE SOILS OF THE BOMBAY PRESIDENCY, PART IV (WITH THIRTEEN TEXT-FIGURES).	<i>D. L. Sahasrabudhke,</i> <i>M.Ag., M.Sc. and V.</i> <i>S. Abhyankar, B.Ag.</i>	268
NITROGEN BALANCE IN BLACK COTTON SOILS IN THE MALWA PLATEAU, II. CHANGES DURING THE HOT WEATHER (WITH THREE TEXT-FIGURES).	<i>Yeshwant D. Wad and</i> <i>R. K. Aurangabadkar</i>	316
STUDIES IN INDIAN FIBRE PLANTS, No. 4. THE ROOT-SYSTEM OF SUNN-HEMP (<i>Crotalaria juncea</i> L.) (WITH PLATES XXVII AND XXVIII).	<i>R. D. Bose, B.Sc.; M.A.</i> <i>Aziz, B.Sc. (Agri.)</i> and <i>M. P. Bhatnagar,</i> <i>B.Sc. (Hons.)</i>	351
EARLINESS IN THE UNITED PROVINCES RICES (WITH TWO TEXT-FIGURES).	<i>R. L. Sethi, M.Sc., B.Sc.</i> (Edin.), <i>I.A.S.; B. L.</i> <i>Sethi, M.Sc., Ph.D.</i> (Wales) and <i>T. R.</i> <i>Mehra, B.Sc.</i>	361
A PRELIMINARY NOTE ON COTTON FAILURE IN THE PUNJAB AND SOME ABNORMALITIES IN THE PLANT (WITH PLATES XXIX—XXXI).	<i>R. H. Dastur</i>	377
DEVELOPMENTAL VARIATION IN THE PADDY GRAIN.	<i>U Tin (1), Dip. Agri.</i>	396
STATISTICAL NOTES FOR AGRICULTURAL WORKERS, No. 17.—ON THE INFLUENCE OF SHAPE AND SIZE OF PLOTS ON THE EFFECTIVE PRECISION OF FIELD EXPERIMENTS WITH <i>Juar</i> (<i>Andropogon Sorghum</i>).	<i>R. K. Kulkarni, B.Ag.;</i> <i>Subhendu Sekhar</i> <i>Bose and P. C.</i> <i>Mahalanobis</i>	460

	PAGE
PRELIMINARY OBSERVATIONS ON SMALL-LEAF DISEASE IN COTTON.	V. P. Gokhale, B.Ag. . 475
INHERITANCE OF CHARACTERS IN SORGHUM—THE GREAT MILLET, VIII. A BROWNISH PURPLE MUTANT (WITH PLATE XXXII).	G. N. Rangaswami Ayyangar, B.A., I.A.S. and A. Kunhikoran Nambiar, B.Sc. Ag. 481
BANANA BREEDING AT THE IMPERIAL COLLEGE OF TROPICAL AGRICULTURE, TRINIDAD, WITH A VIEW TO OBTAIN A TYPE RESISTANT TO THE PANAMA DISEASE, INCLUDING GENETICAL AND CYTOLOGICAL STUDIES ON ALLIED SPECIES.	G. S. Cheema, D.Sc., I.A.S. and S. S. Bhat, M.Ag. 484
ABSTRACT	502
NOTE—	
RESOLUTIONS CARRIED BY THE SIXTH INTERNATIONAL BOTANICAL CONGRESS.	504

PART III (JUNE 1936)

ORIGINAL ARTICLES—

ON THE NATURE OF REACTIONS RESPONSIBLE FOR SOIL ACIDITY, PART IV. INTERPRETATION OF TITRATION CURVES (WITH TWENTY TEXT-FIGURES).	Jnanendranath Mukherjee, D. Sc.; Ramprasad Mitra, M.Sc.; Santosh Chandra Ganguli, M.Sc. and Baradanda Chatterjee, M.Sc. 517
ON THE NATURE OF REACTIONS RESPONSIBLE FOR SOIL ACIDITY, PART V. TITRATION CURVES OF CLAY ACIDS (WITH ELEVEN TEXT-FIGURES)	Ramprasad Mitra, M.Sc. 555
INDIAN SOIL FUNGI	L. D. Galloway . 578
STUDIES ON <i>Schistocerca gregaria</i> FORSK., IV. COLOUR CHANGES AND SEXUAL BEHAVIOUR IN DESEXUALISED <i>Schistocerca gregaria</i> ADULTS.	M. Afzal Husain, M.A. (Cantab.), I.A.S. and Kesho Das Baweja, M.Sc. 586
STUDIES ON <i>Schistocerca gregaria</i> FORSK., V. PIGMENTATION AND PHYSICAL EXERTION (WITH PLATES XXXIII—XXXV).	M. Afzal Husain, M.A. (Cantab.), I.A.S. and C. B. Mathur, M.Sc. 591
STUDIES ON <i>Schistocerca gregaria</i> FORSK., VI. INFLUENCE OF TEMPERATURE ON THE INTENSITY AND EXTENT OF BLACK PATTERN IN THE DESERT LOCUST HOPPERS BRED CROWDED (WITH PLATES XXXVI—XL.)	M. Afzal Husain, M.A. (Cantab.), I.A.S. and Taskhir Ahmad, B.Sc. (Agri.) 624

	PAGE
STUDIES ON <i>Schistocerca gregaria</i> FORSK., VII. FACTORS DETERMINING THE MOVEMENT OF THE VERMIFORM LARVAE (WITH FOUR TEXT-FIGURES).	M. Afzal Husain, M.A. (Cantab.), I.A.S. and Des Raj Bhatia, M.Sc. 665
STUDIES IN PLANT BREEDING TECHNIQUE, I. AN ANALYSIS OF THE EFFICIENCY OF SELECTION METHODS USED IN THE IMPROVEMENT OF MALVI COTTON.	J. B. Hutchinson and Kubersingh 672
IDEAL SIZE AND SHAPE OF SUGARCANE EXPERIMENTAL PLOTS BASED UPON TONNAGE EXPERIMENTS WITH CO 205 AND CO 213 CONDUCTED IN PUSA (WITH PLATE XLI AND TWO TEXT-FIGURES)	Wynne Sayer, B.A., Dip. Agri. (Cantab.); M. Vaidyanathan, M.A., L.T. and S. Subramonia Iyer, M.A. 684
THE BASIS FOR MERGING <i>Sclerospora indica</i> WITH <i>Scl. philippinensis</i> (WITH PLATE XLII).	B. N. Uppal and Wm. H. Weston, Jr. 715
THE TOLERANCE OF WHEAT PLANTS FOR CHLORIDES OF CERTAIN NON-ESSENTIAL ELEMENTS (WITH EIGHT TEXT-FIGURES).	B. N. Singh, D.Sc. and S. Prasad, M.Sc. 720
A BIOCHEMICAL STUDY OF THE PADDY SOILS OF BENGAL WITH SPECIAL REFERENCE TO THEIR NITROGEN-FIXING CAPACITIES.	Pran Kumar De and Anil Kumar Pain 746
BISMUTHATE METHOD FOR THE ESTIMATION OF MANGANESE IN PLANT MATERIAL.	Ramji Narain, Ph.D., D.Sc. and Azmat Singh, L.Ag. 757
UTILIZATION OF CERTAIN FORMS OF INORGANIC NITROGEN DURING THE DECOMPOSITION OF PLANT MATERIALS IN THE SOIL	Jageshwar Gopal Shrikhande, M.Sc., Ph.D., A. I. C. 767
ON THE NATURE OF NITRIFICATION IN SOIL	S. V. Desai, B.Sc., Ph.D., D.Sc., D.I.C. and Fazal-ud-Din, B.Sc. 777
STUDIES IN THE GERMINATION OF CROP SEEDS IN THE FIELD (WITH TWO TEXT-FIGURES.)	Labh Singh, B.Sc. (Agri.), L.Ag. and Nek Alam, B.Sc. (Agri.) 784
A PHOMA DISEASE OF ASPARAGUS (WITH PLATE XLIII).	K. F. Kheswalla 800
GUMMOSIS OF CITRUS IN BOMBAY (WITH PLATES XLIV—XLVI AND TWO TEXT-FIGURES).	B. N. Uppal and M. N. Kamat 803
A NOTE ON THE HAIRINESS OF COTTON	Mohammad Afzal, B.Sc. (Agri.), A.I.C.T.A. 823

	PAGE
A NOTE ON THE STERILE HYBRID BETWEEN <i>Nicotiana Tabacum</i> L. and <i>N. plumbaginifolia</i> Viv. (WITH PLATE XLVII AND ONE TEXT-FIGURE).	B. P. Pal, M.Sc., Ph.D. (Cantab.), F. L. S., and Pushkar Nath, M.Sc. (Hons.) 828
A DISEASE OF <i>Zea Mays</i> CAUSED BY <i>Colletotrichum graminicolum</i> (CES) WILS (WITH PLATES XLVIII AND XLIX AND ONE TEXT-FIGURE).	S. C. Chowdhury . 833
REDUCTION OF NITRATES BY THE SUN . . .	Fazal-ud-Din, B.Sc. . 844
INHERITANCE OF SOME MORPHOLOGICAL CHARACTERS IN <i>Crepis dioscoridis</i> .	Swarn Singh Purewal, M.Sc. (Calif.), Ph.D. (Cornell). 855
A NOTE ON A NEW TYPE OF PROGRESSIVE DAMAGE TO THE STRUCTURE OF COTTON HAIR CAUSED BY MICRO-ORGANISMS (WITH PLATES L AND LI AND ONE TEXT-FIGURE).	A. N. Gulati, M.Sc. . 861
SELECTED ARTICLE—	
METHODS OF ANALYSIS AND APPRECIATION OF WHEAT, FLOURS AND BREAD, PARTICULARLY IN RESPECT OF INVESTIGATIONS ON THE BAKING VALUE (WITH PLATE LII).	Prof. Dr. Luigi Borasio 866
MYCOLOGICAL NOTE—	
ON THE SYSTEMATIC POSITION OF THE SMUT CAUSING MALFORMATION OF <i>Vitis quadrangularis</i> .	B. B. Mundkur . 876
NOTES—	
TABLES OF STANDARD ERRORS OF MENDELIAN RATIOS.	.. 878
PROCLAMATION OF THE UNION OF SOUTH AFRICA GOVERNMENT.	.. 878
REVIEW—	
VERNALIZATION AND PHASIC DEVELOPMENT OF PLANTS.	.. . 882

 PART IV (AUGUST 1936)
ORIGINAL ARTICLES—

STUDIES ON <i>Bemisia gossypiperda</i> M. and L., No. 3. SEASONAL ACTIVITIES OF <i>Bemisia gossypiperda</i> M. and L. (THE WHITE-FLY OF COTTON) IN THE PUNJAB (WITH TWO TEXT-FIGURES).	M. Afzal Husain, M.A. (Cantab.); Kidar Nath Trehan, M.Sc. and Piare Mohan Verma, M.Sc. 893
--	--

	PAGE
STUDIES ON THE ROOT-ROT DISEASE OF COTTON IN THE PUNJAB, II. SOME STUDIES IN THE PHYSIOLOGY OF THE CAUSAL FUNGI (WITH TWO TEXT-FIGURES).	R. Sahai Vasudeva, B.Sc., Ph.D. (Lond.), D.I.C. 904
ON SOME OF THE FACTORS THAT INFLUENCE THE ERROR OF FIELD EXPERIMENTS WITH SPECIAL REFERENCE TO SUGARCANE.	Wynne Sayer, B.A., Dip. Agri. (Cantab.) and P. V. Krishna Iyer, M.A. 917
THE CLASSIFICATION OF THE AUTUMN RICES OF THE PUNJAB AND WESTERN UNITED PROVINCES.	Kashi Ram and R. B. Ekbote, L. Ag. (Hons.) 930
INHERITANCE OF CHARACTERS IN SORGHUM—THE GREAT MILLET, IX. DIMPLED GRAINS (WITH PLATE LIII AND ONE TEXT-FIGURE).	G. N. Rangaswami, Ayyanar, B.A., I. A. S.; M. A. Sankara Ayyar, B.A., B.Sc. Ag.; V. Panduranga Rao, M.A. and A. Kunhikoran Nambiar, B.Sc. Ag. 938
THE STORAGE OF FUNGAL CULTURES (WITH ONE TEXT-FIGURE).	L. D. Galloway . 946
BASE EXCHANGE STUDIES, I. A PRELIMINARY STUDY OF THE EFFECT OF CERTAIN CATIONS SATURATING THE SOIL'S EXCHANGE COMPLEX, ON ITS PHYSICO-CHEMICAL PROPERTIES AND THEIR RELATION TO THE PLANT GROWTH.	Dalip Singh, M.Sc. (Punjab), Ph.D. (Cantab.) and Sukh Dayal Nijawan, M.Sc. 956
SOME STUDIES ON THE SCLEROTIAL DISEASES OF RICE (<i>Sclerotium oryzae</i> CATT.) IN THE PUNJAB (WITH PLATE LIV).	Jai Chand Luthra, M.Sc., D.I.C. (Lond.), I.A.S. and Abdus Sattar, B.Sc. (Ag.), Ph.D. (Lond.), D.I. C. (Lond.) 973
PHOTO-CHEMICAL OXIDATION BY PLANT MATERIALS.	S. V. Desai, D.Sc., Ph.D., D.I.C. and Fazal-ud-Din., B.Sc. 985
ABSTRACT	991
MYCOLOGICAL NOTES—	
A DISEASE OF <i>Cyperus tegetiformis</i> ROXB. CAUSED BY <i>Kawakamia cyperi</i> (MIYABE AND IDETA) MIYABE (WITH PLATE LV)	C. B. Sahaya . 992
A RHIZOCTONIA ON SWEET POTATOES IN BOMBAY (WITH PLATE LVI).	B. B. Mundkur . 994
REVIEW—	
A COMPARATIVE STUDY OF CERTAIN MORPHOLOGICAL CHARACTERS OF SUGARCANE × SORGO HYBRIDS.	.. 996

PART V (OCTOBER 1936)

F. J. F. SHAW, C.I.E., D.Sc., A.R.C.S., F.L.S. (Obituary)

ORIGINAL ARTICLES—

	PAGE
STUDIES ON <i>Schistocerca gregaria</i> FORSK. VIII. INFLUENCE OF CARBON DIOXIDE ON DEVELOPMENT OF BLACK PIGMENTATION IN <i>Schistocerca gregaria</i> FORSK. (WITH PLATES LVII-LIX).	M. Afzal Husain, M.A. (Cantab.) and C. B. Mathur, M.Sc. (Luck.) 1005
THE LOCUST INCURSION OF 1935 IN NORTH-WEST INDIA: ITS SIGNIFICANCE IN THE STUDY OF THE LOCUST PROBLEM (WITH TWO MAPS AND ONE TEXT-FIGURE).	Y. Ramchandra Rao, M.A. 1031
SINGLE-VALUE SOIL PROPERTIES: MOISTURE AT THE STICKY POINT AND <i>R</i> .	J. Charlton, M.Sc., F.I.C., I.A.S. 1054
RAPID DETERMINATION OF SOIL-MOISTURE BY DRYING THE SOIL OVER BUNSEN BURNER.	Ashutosh Sen . . . 1076
STUDIES ON THE ORGANIC NITROGEN OF PADDY SOILS, PART I. DISTRIBUTION OF HUMIC AND NON-HUMIC NITROGEN IN ORGANIC MATTER.	Pran Kumar De and Anil Kumar Pain 1081
THE INHERITANCE OF SEED-CHARACTERS IN GRAM (<i>Cicer arietinum</i> L.) (WITH PLATES LX AND LXI)	Hukum Singh, B.Sc. (Agri.) and R. B. Ekbote, L. Ag. (Hons.) 1087
A PRELIMINARY NOTE ON A NEW SACCHARUM × SORGHUM HYBRID (WITH PLATES LXII AND LXIII)	E. K. Janaki Ammal and T. S. N. Singh 1105
STATISTICAL NOTES FOR AGRICULTURAL WORKERS—	
No. 19.—THE FREQUENCY DISTRIBUTION OF PLOT YIELDS AND THE OPTIMUM SIZE OF PLOTS IN A UNIFORMITY TRIAL WITH RICE IN ASSAM (WITH THREE TEXT-FIGURES).	S. S. Bose, P. M. Ganguli and P. C. Mahalanobis 1107
No. 20.—STUDIES IN TILLER VARIATION (WITH THREE TEXT-FIGURES).	K. C. Banerjee, S. S. Bose and P. C. Mahalanobis 1122

SELECTED ARTICLE—

METHODS OF ANALYSIS AND APPRECIATION OF WHEAT, FLOURS AND BREAD, PARTICULARLY IN RESPECT OF INVESTIGATIONS ON THE BAKING VALUE, II (WITH TWO TEXT-FIGURES)	Prof. Dr. Luigi Borasio 1134
ABSTRACT (WITH PLATES LXIV AND LXV)	.. 1153
REVIEW—	
PLANT BREEDING ABSTRACTS SUPPLEMENT II	.. 1155

PART VI (DECEMBER 1936)

ORIGINAL ARTICLES—

	PAGE
AGRICULTURAL METEOROLOGY : STUDIES ON SOIL-MOISTURE IN RELATION TO MOISTURE IN THE SURFACE LAYERS OF THE ATMOSPHERE DURING THE CLEAR SEASON AT POONA (WITH PLATE LXVI AND TEN TEXT-FIGURES).	<i>L. A. Ramdas, M.A., Ph.D. and M. S. Katti, B.Sc.</i> 1163
STUDIES ON SOIL-MOISTURE, I. MOVEMENT OF SOIL-MOISTURE UNDER FIELD CONDITIONS (WITH EIGHT TEXT-FIGURES).	<i>M. Carbery, D.S.O., M.C., M.A., B.Sc. and M. N. Chakladar, M.Sc.</i> 1201
MINERAL MATTER IN THE JUICE OF SUGARCANE AND ITS EFFECT ON THE RECOVERY OF WHITE SUGAR, I.	<i>P. E. Lander, M.A., D.Sc., F.I.C. and Ramji Narain, Ph.D., D.Sc.</i> 1218
THE PROBLEM OF THE NITROGEN SUPPLY OF RICE, I. FIXATION OF NITROGEN IN THE RICE SOILS UNDER WATER-LOGGED CONDITIONS.	<i>Pran Kumar De</i> 1237
INHERITANCE OF EARLINESS IN UNITED PROVINCES RICES, I (WITH FOUR TEXT-FIGURES).	<i>R. L. Sethi, M.Sc. (Ph.), B.Sc. (Agri.-Edin.), I. A. S.; B. L. Sethi, M.Sc., Ph.D. (Wales) and T. R. Mehta, B.Sc.</i> 1246
MENDELIAN SEGREGATION IN <i>Hibiscus sabdariffa</i> L. IN RELATION TO THE AGE OF THE F_1 AT TIME OF FERTILIZATION (WITH SEVEN TEXT-FIGURES).	<i>R. B. Deshpande, M. Ag. (Bom.)</i> 1274
AN ILLUSTRATION OF THE USE OF THE χ^2 -TECHNIQUE ANALYSIS ON METEOROLOGICAL DATA.	<i>P. V. Sukhatme, B.Sc., Ph.D. (Lond.)</i> 1292
STUDIES IN SORGHUM—THE GREAT MILLET, III. ANTER, POLLEN AND STIGMA (WITH PLATES LXVII AND LXVIII AND TWO TEXT-FIGURES)	<i>G. N. Rangaswami Ayyangar, B.A., I.A.S. and V. Panduranga Rao, M.A.</i> 1299
BLIGHT AND HOLLOW-STEM OF SORGHUM (WITH PLATES LXIX—LXXII AND ONE TEXT-FIGURE).	<i>B. N. Uppal, K. G. Kolhatkar and M. K. Patel</i> 1323

REVIEWS—

FLOUR MILLING PROCESSES	1335
THE CULTIVATED RACES OF SORGHUM	1335
DESTRUCTIVE INSECTS AND PESTS ACT, 1914	1337

INDEX TO VOLUME VI

A

	PAGE
ABHYANKAR, V. S. (SAHASRABUDDHE, D. L. and)—Nitrogen recuperation in the soils of the Bombay Presidency	268
Abnormalities in the cotton plant (DASTUR, R. H.)	377
Acidity of soil, reactions responsible for (MUKHERJEE, J. N. <i>et al.</i>)	517
————— (MITRA, RAMPRASAD)	555
Acids of clay, titration curves of (MITRA, RAMPRASAD)	555
<i>Acrothecium lunatum</i> , causing saprophytic moulds in citrus (CHAUDHURI, H.)	96
AFZAL HUSAIN, M. and AHMAD, TASKHIR—"Studies on <i>Schistocerca gregaria</i> Forsk., II. The Biology of the Desert Locust with special relation to Temperature"	188
————— "Studies on <i>Schistocerca gregaria</i> Forsk., VI. Influence of Temperature on the Intensity and Extent of Black Pattern in the Desert Locust Hoppers Brod Crowded"	624
————— and BAWEJA, KESHO DAS—"Studies on <i>Schistocerca gregaria</i> Forsk., IV. Colour Changes and Sexual Behaviour in Desexualised <i>Schistocerca gregaria</i> Adults"	586
————— and BHATIA, DES RAJ—"Studies on <i>Schistocerca gregaria</i> Forsk., VII. Factors determining the Movement of the Vermiform Larvæ"	635
————— and MATHUR, C. B.—"Studies on <i>Schistocerca gregaria</i> Forsk., III. Why Locusts Eat Wool: A Study in the Hydromania of <i>Schistocerca gregaria</i> "	263
————— "Studies on <i>Schistocerca gregaria</i> Forsk., V. Pigmentation and Physical Exertion"	531
————— "Studies on <i>Schistocerca gregaria</i> Forsk., VIII. Influence of Carbon Dioxide on Development of Black Pigmentation in <i>Schistocerca gregaria</i> Forsk."	1005
—————; TREHAN, K. N. and VERMA, P. M.—"Studies on <i>Bemisia gossypiperda</i> M. & L. No. 3. Seasonal Activities of <i>Bemisia gossypiperda</i> M. & L. (the White-fly of Cotton) in the Punjab"	893
AFZAL, MOHAMMAD—"A Note on the Hairiness of Cotton"	823
Agricultural Meteorology (RAMDAS, L. A. and KATTI, M. S.)	1163

	PAGE
AHMAD, N. (GULATI, A. N. and)—Fibre-maturity of Indian cottons	502
AHMAD, TASKHIR (AFZAL HUSAIN, M. and)—Studies on <i>Schistocerca gregaria</i>	188, 624
ALAM, NEK (LABH SINGH and)—Germination of crop seeds in the field	784
<i>Alternaria citri</i> , causing saprophytic moulds in citrus (CHAUDHURI, H.)	97
Ammonium sulphate, decomposition of, in paddy soils (MUKERJI, B. K. and VISHNOI, S. L.)	17
<i>Andropogon Sorghum</i> (sorghum), inheritance of characters in (RANGASWAMI AYYANGAR, G. N. <i>et al.</i>)	938
— (juar), influence of shape and size of plots on the effective precision of field experiments with (KULKARNI, R. K. <i>et al.</i>)	460
— (sorghum), anther, pollen and stigma in (RANGASWAMI AYYANGAR, G. N. and PANDURANGA RAO, V.)	1299
— (sorghum), blight and hollow-stem of (UPPAL, B. N. <i>et al.</i>)	1323
Anther in sorghum (RANGASWAMI AYYANGAR, G. N. and PANDURANGA RAO, V.)	1299
Asparagus, a phoma disease of (KHESWALLA, K. F.)	800
<i>Aspidiotus orientalis</i> , note on the <i>Chalcidoid</i> parasites of (GLOVER, P. M.)	991
Atmosphere, moisture in the surface layers of, in relation to soil moisture (RAMDAS, L. A. and KATTI, M. S.)	1163
AURANGABADKAR, R. K. (WAD, Y. D. and)—Nitrogen balance in black cotton soils in the Malwa Plateau	316
AZIZ, M. A. (BOSE, R. D. and)—Studies in Indian fibre plants	351
AZMAT SINGH (RAMJI NARAIN and)—Bismuthate method for the estimation of manganese in plant material.	757

B

Baking value, methods of analysis and appreciation of wheat, flours and bread, in respect of (BORASIO, LUIGI)	866, 1134
Banana breeding at the Imperial College of Tropical Agriculture (CHEEMA, G. S. and BHAT, S. S.)	484
BANERJI, I. and SAMAL, K. K.—“Microsporogenesis in <i>Crotalaria juncea</i> Linn.”	116
BANERJEE, K. C.; BOSE, S. S. and MAHALANOBIS, P. C.—“Statistical Notes for Agricultural Workers, No. 20—Studies in Tiller Variation”	1122
Base-exchange studies in soils (DALIP SINGH and NIJAWAN, S. D.)	956
BAWEJA, KESHO Das (AFZAL HUSAIN, M. and)—Studies on <i>Schistocerca gregaria</i>	586

	PAGE
<i>Bemisia gossypiperda</i> , seasonal activities of, in the Punjab (AFZAL HUSAIN, M. <i>et al.</i>)	893
Bengal, a biochemical study of the paddy soils of (DE, P. K. and PAIN, A. K.)	746
BHAT, S. S. (CHEEMA, G. S. and)—Banana breeding at the Imperial College of Tropical Agriculture	484
BHATIA, D. R. (AFZAL HUSAIN, M. and)—Studies on <i>Schistocerca gregaria</i>	665
BHATNAGAR, M. P. (BOSE, R. D. and)—Studies in Indian fibre plants	351
Bibliography of soil science, fertilizers and general agronomy (Notice)	129
Bismuthate method for the estimation of manganese in plant material (RAMJI NARAIN and AZMAT SINGH)	757
Black pattern in the Desert Locust hoppers, influence of temperature on (AFZAL HUSAIN, M. and AHMAD, TASKHIR)	624
Black pigmentation in <i>Schistocerca gregaria</i> , influence of carbon dioxide on the development of (AFZAL HUSAIN, M. and MATHUR, C. B.)	1005
Blight and hollow-stem of sorghum (UPPAL, B. N. <i>et al.</i>)	1323
Bombay, a Rhizoctonia on sweet potatoes in (MUNDKUR, B. B.)	994
———, gummosis of citrus in (UPPAL, B. N. and KAMAT, M. N.)	803
Bombay Presidency, nitrogen recuperation in the soils of (SAHASRA-BUDDHE, D. L. and ABHYANKAR, V. S.)	268
BORASIO, LUIGI—"Methods of Analysis and Appreciation of Wheat, Flours and Bread, particularly in respect of Investigations on the Baking Value"	866, 1134
BOSE, R. D., AZIZ, M. A. and BHATNAGAR, M. P.—"Studies in Indian Fibre Plants, No. 4. The Root-system of Sunn-hemp (<i>Crotalaria juncea</i>)"	351
BOSE, S. S. (KULKARNI, R. K. and)—Statistical notes for agricultural workers	460
——— (BANERJEE, K. C. and)—Statistical notes for agricultural workers	1122
——— (CHAKRAVERTTI, S. C. and)—Statistical notes for agricultural workers	34
———, GANGULI, P. M. and MAHALANOBIS, P. C.—"Statistical Notes for Agricultural Workers, No. 19.—The Frequency Distribution of Plot Yields and the Optimum Size of Plots in a Uniformity Trial with Rice in Assam"	1107
Burma, Cyto-genetic analysis of a type of <i>Saccharum spontaneum</i> from (JANAKI AMMAL, E. K. and SINGH, T. S. N.)	9

C

	PAGE
<i>Cajanus indicus</i> , wilt-resistance in (SHAW, F. J. F.)	139
<i>Capnodium citri</i> , causing saprophytic moulds in citrus (CHAUDHURI, H.)	97
CARBERRY, M. and CHAKLADAR, M. N.—“Studies on Soil-moisture, I. Movement of Soil-moisture under Field Conditions”	1201
Carbon dioxide, the influence of, on development of black pigmentation in <i>Schistocerca gregaria</i> (AFZAL HUSAIN, M. and MATHUR, C. B.)	1005
Central Provinces, decomposition of farmyard manure and sulphate of ammonia in the paddy soils of (MUKERJI, B. K. and VISHNOI, S. L.)	17
<i>Chaetomium</i> sp. causing saprophytic moulds in citrus (CHAUDHURI, H.)	98
CHAKLADAR, M. N. (CARBERRY, M. and)—Studies on soil-moisture	1201
CHAKRAVERTTI, S. C.; BOSE, S. S. and MAHALANOBIS, P. C.—“Statistical Notes for Agricultural Workers, No. 16—A Complex Experiment on Rice at the Chinsurah Farm, Bengal, 1933-34”	34
<i>Chalcidoid</i> parasites of <i>Aspidiotus orientalis</i> , a note on (GLOVER, P. M.)	991
CHARLTON, J.—“Single-value Soil Properties: Moisture at the Sticky Point and <i>R</i> ”	1054
CHATTERJEE, BARADANANDA (MUKHERJEE, J. N. and)—Reactions responsible for soil acidity	517
CHAUDHURI, H.—“Diseases of Citrus in the Punjab”	72
CHEEMA, G. S. and BHAT, S. S.—“Banana Breeding at the Imperial College of Tropical Agriculture, Trinidad”	484
CHINSURAH Farm, a complex experiment on rice at (CHAKRAVERTTI, S. C. <i>et al.</i>)	34
Chlorides of non-essential elements, tolerance of wheat plants for (SINGH, B. N. and PRASAD, S.)	720
Chlorosis disease of citrus (CHAUDHURI, H.)	92
Chota Nagpur, the occurrence of <i>Chrysomphalus aurantii</i> and <i>Laccifer lacca</i> on grape fruit (GLOVER, P. M.)	991
CHOWDHURY, S. C.—“A Disease of <i>Zea Mays</i> caused by <i>Colletotrichum graminicolum</i> (Ces.) Wils”	833
Chromosomes studies in some Indian forms of <i>Saccharum spontaneum</i> (JANAKI AMMAL, E. K.)	1
<i>Chrysomphalus aurantii</i> , the occurrence of, on grape fruit in Ranchi District (GLOVER, P. M.)	991
<i>Cicer arietinum</i> L., inheritance of seed-characters in (HUKUM SINGH and EKBOTE, R. B.)	1087
Citrus diseases in the Panjab (CHAUDHURI, H.)	72
Citrus, gummosis of, in Bombay (UPPAL, B. N. and KAMAT, M. N.)	803
<i>Cladosporium herbarum</i> var. <i>citricola</i> F. & B. causing saprophytic moulds in citrus (CHAUDHURI, H.)	98

	PAGE
Classification of the autumn rice of the Punjab and Western United Provinces (KASHI RAM and EKBOTE, R. B.)	930
Clay acids, titration curves of (MITRA, RAMPRASAD)	555
<i>Colletotrichum gloeosporioides</i> , citrus anthracnose caused by (CHAUDHURI, H.)	75
<i>Colletotrichum graminicolum</i> , on <i>Zea Mays</i> (CHOWDHURY, S. C.)	833
Colour changes and sexual behaviour in desexualised <i>Schistocerca gregaria</i> adults (AFZAL HUSAIN, M. and BAWEJA, K. D.)	586
Cotton (Dharwar), influence of storage on the fibre properties of (NAYAK, H. R.)	52
Cotton failure in the Punjab and some abnormalities in the cotton plant (DASTUR, R. H.)	377
——— fibre, a device for separating different lengths of, from seed-cotton (McNAMARA, H. C. and STUTTS, R. T.)	1153
——— hair, progressive damage to, caused by micro-organisms (GULATI, A. N.)	861
———, hairiness of (AFZAL, M.)	823
——— (Malvi), analysis of selection methods used in the improvement of (HUTCHINSON, J. B. and KUBERSINGH)	672
——— plant, some abnormalities in (DASTUR, R. H.)	377
———, root-rot disease of, in the Punjab (VASUDEVA, R. S.)	904
———, seasonal activities of the White-fly of, in the Punjab (AFZAL HUSAIN, M. <i>et al.</i>)	893
———, small-leaf disease of (GOKHALE, V. P.)	475
——— soils (black), nitrogen balance in (WAD, Y. D. and AURANGABAD-KAR, R. K.)	316
———, variation in the fibre-properties of similar strains of, grown in different tracts of Gujarat (PATEL, B. S. and SRINAGABHUSHANA)	63
——— (Indian), fibre-maturity in (GULATI, A. N. and AHMAD, N.)	502
<i>Crepis dioscoridis</i> , inheritance of some morphological characters in (PUREWAL, S. S.)	855
<i>Crotalaria juncea</i> , microsporogenesis in (BANERJI, I. and SAMAL, K. K.)	116
———, root-system of (BOSE, R. D. <i>et al.</i>)	351
<i>Cyperus tegetiformis</i> , a disease of, caused by <i>Kawakamia cyperi</i> (SAHAYA, C. B.)	992
Cyto-genetic analysis of <i>Saccharum spontaneum</i> (JANAKI AMMAL, E. K.)	1
——— (JANAKI AMMAL, E. K. and SINGH, T. S. N.)	9

D

	PAGE
DALIP SINGH and NIJAWAN, S. D.—“Base-exchange Studies. I. A Preliminary Study of the Effect of certain Cations saturating the Soil's Exchange Complex on its Physico-chemical Properties, and their relation to the Plant Growth”	956
DASTUR, R. H.—“A Preliminary Note on Cotton Failure in the Panjab and some Abnormalities in the Plant”	377
DE, PRAN KUMAR—“The Problem of the Nitrogen Supply of Rice, I. Fixation of Nitrogen in the Rice Soils under Water-logged Conditions”	1237
————— and PAIN, ANIL KUMAR—“A Biochemical Study of the Paddy Soils of Bengal with special reference to their Nitrogen-fixing Capacities”	746
————— “Studies on the Organic Nitrogen of Paddy Soils, Part I. Distribution of [‘Humic’ and ‘Non-Humic’ Nitrogen in Organic Matter”	1081
DESAI, S. V. and FAZAL-UD-DIN.—“On the Nature of Nitrification in Soil”	777
————— “Photo-chemical Oxidation by Plant Materials”	985
Desert Locust, biology of, with special relation to temperature (AFZAL HUSAIN, M. and AHMAD, T.)	188
—————, factors determining movement of the [vermiform larvae of (AFZAL HUSAIN, M. and BHATIA, D. R.)	665
—————, influence of temperature on black pattern in (AFZAL HUSAIN, M. and AHMAD, T.)	624
—————, pigmentation and physical exertion in (AFZAL HUSAIN, M. and MATHUR, C. B.)	591
—————, colour changes and sexual behaviour in desexualised adults (AFZAL HUSAIN, M. and BAWEJA, K. D.)	586
—————, influence of carbon dioxide on development of black pigmentation in (AFZAL HUSAIN, M. and MATHUR, C. B.)	1005
—————, the incursion of 1935 (RAMCHANDRA RAO, Y.)	1031
—————, why they eat wool (AFZAL HUSAIN, M. and MATHUR, C. B.)	263
DESHPANDE, R. B.—“Mendelian Segregation in <i>Hibiscus sabdariffa</i> L. in relation to the Age of the F ₁ at Time of Fertilization”	1274
Destructive Insects and Pests Act, 1914 (corrected up to 1st October 1936)	1337
Dharwar cotton, influence of storage on the fibre properties of (NAYAK, H. R.)	52
Dimpled grains in sorghum, inheritance of (RANGASWAMI AYYANGAR, G. N. <i>et al.</i>)	938

E

	PAGE
Earliness in the United Provinces rice (SETHI, R. L. <i>et al.</i>)	361
—, inheritance of (SETHI, R. L. <i>et al.</i>)	1246
EKBOTE, R. B. (HUKUM SINGH and)—Inheritance of seed-characters in gram	1087
— (KASHI RAM and)—Classification of the autumn rice of the Punjab and Western United Provinces	930
Exchange complex of soils, effect of cations saturating it, on its physico-chemical properties (DALIP SINGH and NIJAWAN, S. D.)	956

F

Farmyard manure, decomposition of, in the paddy soils of the Central Provinces (MUKERJI, B. K. and VISHNOI, S. L.)	17
FAZAL-UD-DIN—"Reduction of Nitrates by the Sun"	844
— (DESAI, S. V. and)—Photo-chemical oxidation by plant materials	985
— Nitrification in soil	777
Fibre-maturity of Indian cottons (GULATI, A. N. and AHMAD, N.)	502
— plants (Indian), studies in (BOSE, R. D. <i>et al.</i>)	351
— properties of Dharwar cotton, influence of storage on (NAYAK, H. R.)	52
— of similar strains of cotton grown in different tracts of Gujarat (PATEL, B. S. and SRINAGABHUSHANA).	63
Fibres (cotton), a device for separating different lengths of, from seed cotton (MCNAMARA, H. C. and STUTTS, R. T.)	1153
Field experiments, factors that influence errors in, with special reference to sugarcane (SAYER, W. and KRISHNA IYER, P. V.)	917
— with <i>juar</i> , influence of shape and size of plots on the effective precision of (KULKARNI, R. K. <i>et al.</i>)	460
Flours, wheat and bread, methods of analysis and appreciation of (LUIGI BORASIO)	866, 1134
Fungal cultures, the storage of (GALLOWAY, L. D.)	946
Fungi of Indian soils (GALLOWAY, L. D.)	578

G

GALLOWAY, L. D.—"Indian Soil Fungi"	578
— "The Storage of Fungal Cultures"	946
GANGULI, P. M. (BOSE, S. S. and)—Statistical notes for agricultural workers	1107

	PAGE
GANGULI, S. C. (MUKHERJEE, J. N. and)—Reactions responsible for soil acidity	517
Germination of crop seeds in the field (LABH SINGH and ALAM, N.)	784
GLOVER, P. M.—“ An Account of the Occurrence of <i>Chrysomphalus aurantii</i> Mask. and <i>Laccifer lacca</i> Ker. on Grape Fruit in Ranchi District, Chota Nagpur, with a Note on the <i>Chalcidoid</i> Parasites of <i>Aspidiotus orientalis</i> Newst.” (Abstract)	991
GOKHALE, V. P.—“ Preliminary Observations on Small-leaf Disease in Cotton ”	475
Gram, inheritance of seed characters in (HUKUM SINGH and EKBOTE, R. B.)	1087
Grape fruit, the occurrence of <i>Chrysomphalus aurantii</i> and <i>Laccifer lacca</i> on (GLOVER, P. M.)	991
Great millet (see ‘ sorghum ’)	481, 938, 1105, 1299, 1323, 1335
Gujarat, fibre-properties of similar strains of cotton grown in different tracts of (PATEL, B. S. and SRINAGABHUSHANA)	63
GULATI, A. N.—“ A Note on a New Type of Progressive Damage to the Structure of Cotton Hair caused by Micro-organisms ”	861
————— and AHMAD, N.—“ Fibre-maturity of Indian Cottons ” (Abstract)	502
Gummosis of citrus in Bombay (UPPAL, B. N. and KAMAT, M. N.)	803

H

Hairiness of cotton (AFZAL, M.)	823
<i>Helminthosporium</i> spp. on sugarcane (SUBRAMANIAM, L. S.)	11
<i>Hibiscus sabdariffa</i> , Mendelian segregation in (DESHPANDE, R. B.)	1274
Hollow-stem and blight of sorghum (UPPAL, B. N. <i>et al.</i>)	1323
Hot weather, changes in black cotton soils during (WAD, Y. D. and AURANGABADKAR, R. K.)	316
HUKUM SINGH and EKBOTE, R. B.—“ The Inheritance of Seed-characters in Gram (<i>Cicer arietinum</i> L.) ”	1087
Humic nitrogen, the distribution of, in organic matter of soils (DE, P. K. and PAIN, A. K.)	1081
HUTCHINSON, J. B. and KUBERSINGH.—“ Studies in Plant Breeding Technique, I. An Analysis of the Efficiency of Selection Methods used in the Improvement of Malvi Cotton ”	672
Hybrid of <i>Saccharum</i> × <i>Sorghum</i> (JANAKI AMMAL, E. K. and SINGH, T. S. N.)	1105
Hybrid, sterile, between <i>Nicotiana Tabacum</i> and <i>N. plumbaginifolia</i> (PAL, B. P. and PUSHKAR NATH)	828
Hydromania of <i>Schistocerca gregaria</i> , a study in (AFZAL HUSAIN, M. and MATHUR, C. B.)	263

I

	PAGE
Imperial College of Tropical Agriculture, banana breeding at the (CHEEMA, G. S. and BHAT, S. S.)	484
Indian corn (see " <i>Zea Mays</i> ")	833
—— cottons, fibre-maturity of (GULATI, A. N. and AHMAD, N.)	502
—— fibre plants, studies in (BOSE, R. D. <i>et al.</i>)	351
—— forms of <i>Saccharum spontaneum</i> , chromosome studies in (JANAKI AMMAL, E. K.)	1
—— pulses, studies in (SHAW, F. J. F.)	139
—— soil fungi (GALLOWAY, L. D.)	578
Inheritance of characters in sorghum (RANGASWAMI AYYANGAR, G. N. <i>et al.</i>)	481, 938
—— of earliness in United Provinces rices (SETHI, R. L. <i>et al.</i>)	1246
—— of morphological characters and of wilt-resistance in <i>rahar</i> (<i>Cajanus indicus</i>) (SHAW, F. J. F.)	139
—— of seed characters in gram (HUKUM SINGH and EKBOTE, R. B.)	1087
—— of some morphological characters in <i>Crepis dioscoridis</i> (PUREWAL, S. S.)	855
Inorganic nitrogen, utilization of, during the decomposition of plant materials in the soil (SHRIKHANDE, J. G.)	767
International Botanical Congress (Sixth), resolutions carried by	504

J

JANAKI-AMMAL, E. K.—"Cyto-genetic Analysis of <i>Saccharum sponta- neum</i> L., I. Chromosome Studies in some Indian Forms"	1
—— and SINGH, T. S. N.—"A Preliminary Note on a New <i>Saccharum</i> × <i>Sorghum</i> Hybrid"	1105
———"Cyto-genetic Analysis of <i>Saccharum spontaneum</i> L., 2. A Type from Burma"	9
JUAR, blight and hollow-stem of (UPPAL, B. N. <i>et al.</i>)	1323
——, influence of shape and size of plots on the effective precision of field experiments with (KULKARNI, R. K. <i>et al.</i>)	460
Juice of sugarcane, mineral matter in, and its effect on the recovery of white sugar (LANDER, P. E. and RAMJI NARAIN)	1218

K

KAMAT, M. N. (UPPAL, B. N. and)—A new variety of <i>Oidiopsis taurica</i>	110
———Gummosis of citrus in Bombay	803
KASHI RAM and EKBOTE, R. B.—"The Classification of the Autumn Rices of the Punjab and Western United Provinces"	930

	PAGE
KATTI, M. S. (RAMDAS, L. A. and)—Agricultural meteorology . . .	1163
<i>Kawakamia cyperi</i> , a disease of <i>Cyperus tegetiformis</i> , caused by (SAHAYA, C. B.)	992
KHESWALLA, K. F.—“ A Phoma Disease of Asparagus ”	800
KOLHATKAR, K. G. (UPPAL, B. N. and)—Blight and hollow-stem of sorghum	1323
KRISHNA IYER, P. V. (SAYER, W. and)—Factors that influence the error of field experiments	917
KUBERSINGH (HUTCHINSON, J. B. and)—Studies in plant breeding technique	672
KULKARNI, R. K., BOSE, SUBHENDU SEKHAR and MAHALANOBIS, P. C.—“ Statistical Notes for Agricultural Workers, No. 17.—On the Influence of Shape and Size of Plots on the Effective Precision of Field Experiments with <i>Juar</i> (<i>Andropogon Sorghum</i>) ”	460
KUNHIKORAN NAMBIAR, A. (RANGASWAMI AYYANGAR, G. N. and)—Inheritance of characters in sorghum	481, 938

L

LABH SINGH and ALAM, NEK.—“ Studies in the Germination of Crop Seeds in the Field ”	784
<i>Laccifer lacca</i> , occurrence on grape fruit in Ranchi District (GLOVER, P. M.)	991
LANDER, P. E. and RAMJI NARAIN.—“ Mineral Matter in the Juice of Sugarcane and its Effect on the Recovery of White Sugar, I.” . . .	1218
Locust (Desert), a study in the hydromania of (AFZAL HUSAIN, M. and MATHUR, C. B.)	263
—————, factors determining movement of the vermiform larvae of (AFZAL HUSAIN, M. and BHATIA, D. R.)	665
—————, incursion of 1935 in North-West India (RAMCHANDRA RAO, Y.)	1031
—————, influence of temperature on black pattern in (AFZAL HUSAIN, M. and AHMAD, T.)	624
—————, pigmentation and physical exertion in (AFZAL HUSAIN, M. and MATHUR, C. B.)	591
—————, colour changes and sexual behaviour in desexualised adults of (AFZAL HUSAIN, M. and BAWEJA, K. D.)	580
—————, influence of carbon dioxide on black pigmentation in (AFZAL HUSAIN, M. and MATHUR, C. B.)	1005
—————, the biology of (AFZAL HUSAIN, M. and AHMAD, T.) . . .	188
Locusts, why they eat wool (AFZAL HUSAIN, M. and MATHUR, C. B.) . .	263
LUTHRA, J. C. and SATTAR, A.—“ Some Studies on the Sclerotial Diseases of Rice (<i>Sclerotium oryzae</i> Catt.) in the Punjab ”	973

M

	PAGE
MAHALANOBIS, P. C. (BANERJEE, K. C. and)—Statistical notes for agricultural workers	1122
— (BOSE, S. S. and)—Statistical notes for agricultural workers	1107
— (CHAKRAVERTI, S. C. and)—Statistical notes for agricultural workers	34
— (KULKARNI, B. K. and)—Statistical notes for agricultural workers	460
Maize, disease of, caused by <i>Colletotrichum graminicolum</i> (CHOWDHURY, S. C.)	833
Malformation of <i>Vitis quadrangularis</i> , systematic position of the smut causing (MUNDKUR, B. B.)	876
Malvi cotton, analysis of selection methods used in the improvement of (HUTCHINSON, J. B. and KUBERSINGH)	672
Malwa Plateau, nitrogen balance in black cotton soils in (WAD, Y. D. and AURANGABADKAR, R. K.)	316
Manganese in plant material, bismuthate method for the estimation of (RAMJI NARAIN and AZMAT SINGH)	757
Manure (farmyard), decomposition of, in the paddy soils of the Central Provinces (MUKERJI, B. K. and VISHNOI, S. L.)	17
MATHUR, C. B. (AFZAL HUSAIN, M. and)—Studies on <i>Schistocerca gregaria</i>	263, 591, 1005
McNAMARA, H. C. and STUTTS—R. T.—“A Device for separating different Lengths of Fibres from Seed Cotton” (Abstract)	1153
MEHTA, T. R. (SETHI, R. L. and)—Earliness in the United Provinces rices	361
— Inheritance of earliness in United Provinces rices	1246
Mendelian ratios, tables of standard errors of	878
— segregation in <i>Hibiscus sabdariffa</i> L. in relation to the age of the F_1 at time of fertilization (DESHPANDE, R. B.)	1274
Meteorological data, the use of χ^2 -technique of analysis on (SUKHATME, P. V.)	1292
Meteorology, agricultural, studies in (RAMDAS, L. A. and KATTI, M. S.)	1163
Micro-organisms, progressive damage to the structure of cotton hair caused by (GULATI, A. N.)	861
Microsporogenesis in <i>Crotalaria juncea</i> (BANERJI, I. and SAMAL, K. K.)	116
Mineral matter in the juice of sugarcane and its effect on the recovery of white sugar (LANDER, P. E. and RAMJI NARAIN)	1218
MITRA, RAMPRASAD (MUKHERJEE, J. N. and)—Reactions responsible for soil acidity	517
MITRA, RAMPRASAD.—“On the Nature of Reactions responsible for Soil Acidity, Part V, Titration Curves of Clay Acids”	555

	PAGE
Moisture in soils at sticky point and <i>R</i> (CHARLTON, J.).	1054
Moisture in the surface layers of the atmosphere, soil moisture in relation to (RAMDAS, L. A. and KATTI, M. S.)	1163
Morphological characters, inheritance of, in <i>rahar</i> (<i>Cajanus indicus</i>) (SHAW, F. J. F.)	139
MUKERJI, B. K. and VISHNOI, S. L.—“A Bio-chemical Study of the Decomposition of Farmyard Manure and Sulphate of Ammonia in the Paddy Soils of the Central Provinces”	17
MUKHERJEE, JNANENDRANATH; MITRA, RAMPRASAD; GANGULI, SANTOSH CHANDRA and CHATTERJEE, BARADANANDA.—“On the Nature of Reactions responsible for Soil Acidity, Part IV. Interpretation of Titration Curves”	517
MUNDKUR, B. B.—“A Rhizoctonia on Sweet Potatoes in Bombay”	994
————— “On the Systematic Position of the Smut causing Malformation of <i>Vitis quadrangularis</i> ”	876
Mutant, brownish purple, in sorghum (RANGASWAMI AYYANGAR, G. N. and KUNHIKORAN NAMBIAR, A.)	481
<i>Mycosyrinx arabica</i> (Henn.), smut causing malformation of <i>Vitis quadrangularis</i> (MUNDKUR, B. B.)	876
N	
NAYAK, H. R.—“Influence of Storage on some of the Fibre-properties of Dharwar Cotton”	52
<i>Nicotiana plumbaginifolia</i> and <i>N. Tabacum</i> , a sterile hybrid between (PAL, B. P. and PUSHKAR NATH)	828
<i>Nicotiana Tabacum</i> and <i>N. plumbaginifolia</i> , a sterile hybrid between (PAL, B. P. and PUSHKAR NATH)	828
NIJAWAN, S. D. (DALIP SINGH and)—Base-exchange studies	956
Nitrates, reduction of, by the sun (FAZAL-UD-DIN)	844
Nitrification in soil (DESAI, S. V. and FAZAL-UD-DIN).	777
Nitrogen balance in black cotton soils in the Malwa Plateau (WAD, Y. D. and AURANGABADKAR, R. K.)	316
Nitrogen-fixing capacities of the paddy soils of Bengal (DE, P. K. and PAIN, A. K.)	746
Nitrogen (humic and non-humic), distribution of, in organic matter of soils (DE, P. K. and PAIN, A. K.)	1081
———— (inorganic), utilization of, during the decomposition of plant materials in the soil (SHRIKHANDE, J. G.)	767
———— in rice soils, fixation of, under water-logged conditions (DE, P. K.)	1237
———— (organic) of paddy soils (DE, P. K. and PAIN, A. K.)	1081
———— recuperation in the soils of the Bombay Presidency (SAHASRA-BUDDHE, D. L. and ABHYANKAR, V. S.)	268

	Page
Nitrogen supply of rice, the problem of (DE, P. K.)	1237
Non-humic nitrogen, the distribution of, in organic matter of soils (DE, P. K. and PAIN, A. K.)	1081
North-West India, the locust incursion of 1935 in (RAMCHANDRA RAO, Y.)	1031

O

<i>Oidiopsis taurica</i> , a new variety of (UPPAL, B. N. <i>et al.</i>)	110
Organic matter of soils, distribution of humic and non-humic nitrogen in (DE, P. K. and PAIN, A. K.)	1081
——— nitrogen of paddy soils (DE, P. K. and PAIN, A. K.)	1081
<i>Oryza sativa</i> (see "Rice")	17, 34, 361, 396, 746, 930, 973, 1081, 1107, 1237, 1246

P

Paddy (see "Rice")	17, 34, 361, 396, 746, 930, 973, 1081, 1107, 1237, 1246
PAIN, A. K. (DE, P. K. and)—Paddy soils of Bengal.	746
——— Studies on the organic nitrogen of paddy soils	1081
PAL, B. P.—"Effects of Brown Rust Attack on Wheat"	127
——— and PUSHKAR NATH.—"A Note on the Sterile Hybrid between <i>Nicotiana Tabacum</i> L. and <i>N. plumbaginifolia</i> Viv."	828
Panama disease of banana, breeding with a view to obtain a type resistant to (CHEEMA, G. S. and BHAT, S. S.)	484
PANDURANGA RAO, V. (RANGASWAMI AYYANGAR, G. N. and)—Inheritance of characters in sorghum	938
——— Studies in sorghum	1299
PATEL, B. S. and SRINAGABHUSHANA.—"Variation in the Fibre-properties of similar Strains of Cotton grown in different Tracts of Gujarat"	63
PATEL, M. K. (UPPAL, B. N. and)—A new variety of <i>Oidiopsis taurica</i>	110
——— Blight and hollow-stem of sorghum	1323
Phoma disease of asparagus (KHESWALLA, K. F.)	800
Photo-chemical oxidation by plant materials (DESAI, S. V. and FAZAL-UD-DIN)	985
Physical exertion and pigmentation in <i>Schistocerca gregaria</i> (AFZAL HUSAIN, M. and MATHUR, C. B.)	591
Pigeon-pea (<i>Cajanus indicus</i>), wilt resistance in (SHAW, F. J. F.)	139
Pigmentation and physical exertion in <i>Schistocerca gregaria</i> (AFZAL HUSAIN, M. and MATHUR, C. B.)	591

	PAGE
Pigmentation (black) in <i>Schistocerca gregaria</i> , influence of carbon dioxide on the development of (AFZAL HUSAIN, M. and MATHUR, C. B.)	1005
Plant breeding technique, studies in (HUTCHINSON, J. B. and KUBER-SINGH)	672
— growth, relation of cations saturating the soil's exchange complex to (DALIP SINGH and NIJAWAN, S. D.)	956
— material, bismuthate method for the estimation of manganese in (RAMJI NARAIN and AZMAT SINGH)	757
— materials in the soil, utilization of inorganic nitrogen during the decomposition of (SHRIKHANDE, J. G.)	767
—, photo-chemical oxidation by (DESAI, S. V. and FAZAL-UD-DIN)	985
<i>Pleospora herbarum</i> , causing saprophytic moulds in citrus (CHAUDHURI, H.)	98
Plot yields and the optimum size of plots in a uniformity trial with rice in Assam (BOSE, S. S. <i>et al.</i>)	1107
Pollen in sorghum (RANGASWAMI AYYANGAR, G. N. and PANDURANGA RAO, V.)	1299
PRASAD, S. (SINGH, B. N. and)—Tolerance of wheat plants for chlorides of non-essential elements	720
Pulses (Indian), studies in (SHAW, F. J. F.)	139
Punjab, classification of the autumn rices of (KASHI RAM and EKBOTE, R. B.)	930
—, cotton failure in, and some abnormalities in the plant (DASTUR, R. H.)	377
—, diseases of citrus in the (CHAUDHURI, H.)	72
—, root-rot disease of cotton in (VASUDEVA, R. S.)	904
—, seasonal activities of White-fly of cotton in (AFZAL HUSAIN, M. <i>et al.</i>)	893
—, sclerotial diseases of rice in (LUTHRA, J. C. and SATTAR, A.)	973
PUREWAL, SWARN SINGH.—“Inheritance of some Morphological Characters in <i>Crepis dioscoridis</i> ”	855
Pusa, tonnage experiments with Co 205 and Co 213, in (SAYER, W. <i>et al.</i>)	684
PUSHKAR NATH (PAL, B. P. and)—Sterile hybrid between <i>Nicotiana Tabacum</i> and <i>N. plumbaginifolia</i>	828
<i>Pythium</i> sp. on sugarcane (SUBRAMANIAM, L. S.)	13

	PAGE
<i>Rahar (Cajanus indicus)</i> , wilt-resistance in (SHAW, F. J. F.) . . .	139
RAMCHANDRA RAO, Y.—“The Locust Incursion of 1935 in North-West India—Its Significance in the Study of the Locust Problem” . . .	1031
RAMDAS, L. A. and KATTI, M. S.—“Agricultural Meteorology : Studies on Soil-moisture in relation to Moisture in the Surface Layers of the Atmosphere during the Clear Season at Poona” . . .	1163
RAMJI NARAIN and AZMAT SINGH.—“Bismuthate Method for the Estimation of Manganese in Plant Material” . . .	757
————— (LANDER, P. E. and).—Mineral matter in the juice of sugarcane . . .	1218
Ranchi District, the occurrence of <i>Chrysomphalus aurantii</i> and <i>Laccifer lacca</i> on grape fruit in (GLOVER, P. M.) . . .	991
RANGASWAMI AYYANGAR, G. N. and KUNHIKORAN NAMBIAR, A.—“Inheritance of Characters in Sorghum—the Great Millet, VIII. A Brownish Purple Mutant” . . .	481
————— and PANDURANGA RAO, V.—“Studies in Sorghum—the Great Millet, III. Anther, Pollen and Stigma” . . .	1299
—————; SANKARA AYYAR, M. A.; PANDURANGA RAO, V. and KUNHIKORAN NAMBIAR, A.—“Inheritance of Characters in Sorghum—the Great Millet, IX. Dimpled Grain” . . .	938
Recuperation of nitrogen in the soils of the Bombay Presidency (SAHASRABUDDHE, D. L. and ABHYANKAR, V. S.) . . .	268
Reduction of nitrates by the sun (FAZAL-UD-DIN) . . .	844
REVIEWS—	
Vernalization and Phasic Development of Plants . . .	882
A Comparative Study of certain Morphological Characters of Sugarcane × Sorgho Hybrids . . .	996
Plant Breeding Abstracts Supplement II: Summary of Reports received from Stations in the British Empire, 1932-35 . . .	1155
The Cultivated Races of Sorghum . . .	1335
Flour Milling Processes . . .	1335
<i>Rhizoctonia bataticola</i> , causing root-rot disease of cotton in the Punjab (VASUDEVA, R. S.) . . .	904
<i>Rhizoctonia</i> on sweet potatoes in Bombay (MUNDKUR, B. B.) . . .	994
<i>Rhizoctonia solani</i> , causing root-rot of cotton in the Punjab (VASUDEVA, R. S.) . . .	904
Rice, a complex experiment on (CHAKRAVERTTI, S. C. <i>et al.</i>) . . .	34
—— grain, developmental variation in (TIN, U) . . .	396
——, sclerotial disease of, in the Punjab (LUTHRA, J. C. and SATTAR, A.) . . .	973
——, the frequency distribution of plot yields and optimum plot size in a uniformity trial with (BOSE, S. S. <i>et al.</i>) . . .	1107

	PAGE
Rice, the problem of the nitrogen supply of (DE, P. K.)	1237
— soils, decomposition of farmyard manure and sulphate of ammonia in (MUKERJI, B. K. and VISHNOI, S. L.)	17
—, fixation of nitrogen in, under water-logged conditions (DE, P. K.)	1237
— of Bengal, bio-chemical study of (DE, P. K. and PAIN, A. K.) .	746
—, organic nitrogen of (DE, P. K. and PAIN, A. K.)	1081
Rices (autumn) of the Punjab and Western United Provinces, the classification of (KASHI RAM and EKBOTE, R. B.)	930
— of United Provinces, earliness in (SETHI, R. L. <i>et al.</i>) . . .	361, 1246
Root-rot disease of cotton in the Punjab (VASUDEVA, R. S.) . .	904
Root-system of sunn-hemp (BOSE, R. D. <i>et al.</i>)	351
Rust (brown) attack on wheat (PAL, B. P.)	127

S

<i>Saccharum spontaneum</i> , cyto-genetic analysis of (JANAKI AMMAL, E. K.) .	1
— and SINGH, T. S. N.)	9
<i>Saccharum</i> × sorghum hybrids (JANAKI AMMAL, E. K. and SINGH, T. S. N.)	1105
SAHASRABUDDHE, D. L. and ABHYANKAR, V. S.—“Nitrogen Recuperation in the Soils of the Bombay Presidency, Part IV”	268
SAHAYA, C. B.—“A Disease of <i>Cyperus tegetiformis</i> Roxb. caused by <i>Kawakamia cyperi</i> (Miyabe and Ideta) Miyabe”	992
SAMAL, K. K. (BANERJI, I. and)—Microsporogenesis in <i>Crotalaria juncea</i>	116
SANKARA AYYAR, M. A. (RANGASWAMI AYYANGAR, G. N. and)—Inheritance of characters in sorghum	938
Sann-hemp (<i>Crotalaria juncea</i>), microsporogenesis in (BANERJI, I. and SAMAL, K. K.)	116
—, root-system of (BOSE, R. D. <i>et al.</i>)	351
Saprophytic moulds of citrus (CHAUDHURI, H.)	95
SATTAR, A. (LUTHRA, J. C. and)—Sclerotial diseases of rice in the Punjab	973
SAYER, W. and KRISHNA IYER, P. V.—“On Some of the Factors that Influence the Error of Field Experiments with special reference to Sugarcane”	917
— ; VAIDYANATHAN, M. and SUBRAMONIA IYER, S.—“Ideal Size and Shape of Sugarcane Experimental Plots based upon Tonnage Experiments with Co 205 and Co 213 conducted in Pusa” .	684
<i>Schistocerca gregaria</i> , a study in the hydromania of (AFZAL HUSAIN, M. and MATHUR, C. B.)	263
—, colour changes and sexual behaviour in desexualised adults of (AFZAL HUSAIN, M. and BAWEJA, K. D.)	586

	PAGE
<i>Schistocerca gregaria</i> , why they eat wool (AFZAL HUSAIN, M. and MATHUR, C. B.)	263
—, factors determining the movement of vermiform larvae of (AFZAL HUSAIN, M. and BHATIA, D. R.)	665
—, influence of temperature on black pattern in (AFZAL HUSAIN, M. and AHMAD, T.)	624
— (locust), incursion of, in North-West India (RAM-CHANDRA RAO, Y.)	1031
—, pigmentation and physical exertion in (AFZAL HUSAIN, M. and MATHUR, C. B.)	591
—, Influence of carbon dioxide on black pigmentation in (AFZAL HUSAIN, M. and MATHUR, C. B.)	1005
—, the biology of (AFZAL HUSAIN, M. and AHMAD T.)	188
<i>Sclerospora indica</i> , merging of, with <i>Scl. philippinensis</i> (UPPAL, B. N. and WESTON, WM. H.)	715
<i>Sclerospora philippinensis</i> , basis for merging <i>Scl. indica</i> with (UPPAL, B. N. and WESTON, WM. H.)	715
Sclerotial diseases of rice in the Punjab (LUTHRA, J. C. and SATTAR, A.)	973
<i>Sclerotium oryzae</i> on rice in the Punjab (LUTHRA, J. C. and SATTAR, A.)	973
Seed-characters in gram, the inheritance of (HUKUM SINGH and EKBOTE, R. B.)	1087
Seedling diseases of sugarcane (SUBRAMANIAM, L. S.)	11
Seeds of crops, germination of, in the field (LABH SINGH and ALAM, N.)	784
SEN, A.—“Rapid Determination of Soil-moisture by Drying the Soil over Bunsen Burner”	1076
SETHI, B. L. (SETHI, R. L. and)—Earliness in the United Provinces rices	361
— Inheritance of Earliness in United Provinces rices	1246
SETHI, R. L.; SETHI, B. L. and MEHTA, T. R.—“Earliness in the United Provinces Rices”	361
— “Inheritance of Earliness in United Provinces Rices, I”	1246
Sexual behaviour and colour changes in desexualised <i>Schistocerca gregaria</i> adults (AFZAL HUSAIN, M. and BAWEJA, K. D.)	586
Shape and size of plots, influence of, on the effective precision of field experiments with <i>guar</i> (KULKARNI, R. K. et al.)	460
SHAW, F. J. F.—“Studies in Indian Pulses: the Inheritance of Morphological Characters and of Wilt Resistance in <i>Rahar</i> (<i>Cajanus indicus</i> Spreng.)”	139

	PAGE
SHRIKHANDE, JAGESHWAR GOPAL.—“Utilization of certain Forms of Inorganic Nitrogen during the Decomposition of Plant Materials in the soil”	767
SINGH, B. N. and PRASAD, S.—“The Tolerance of Wheat Plant for Chlorides of certain Non-essential Elements”	720
SINGH, T. S. N. (JANAKI AMMAL, E. K. and).—A new saccharum × sorghum hybrid	1105
—————Cyto-genetic analysis of <i>Saccharum spontaneum</i>	9
Single-value soil properties (CHARLTON, J.)	1054
Size and shape of sugarcane experimental plots based on tonnage experiments with Co 205 and Co 213 (SAYER, W. <i>et al.</i>)	684
Small-leaf disease of cotton (GOKHALE, V. P.)	475
Smut causing malformation of <i>Vitis quadrangularis</i> , systematic position of (MUNDKUR, B. B.)	876
Soil acidity, reactions responsible for (MITRA, RAMPRASAD)	555
—————(MUKHERJEE, J. N. <i>et al.</i>)	517
Soil, exchange complex in, effect of cations saturating it, on its physico-chemical properties, and their relation to the plant growth (DALIP SINGH and NIJAWAN, S. D.)	956
———fungi (Indian) (GALLOWAY, L. D.)	578
———moisture, in relation to moisture in the surface layers of the atmosphere during the clear season at Poona (RAMDAS, L. A. and KATTI, M. S.)	1163
———, movement of, under field conditions (CARBERY, M. and CHAKLADAR, M. N.)	1201
———, rapid determination of, by drying the soil over Bunsen burner (SEN, A.)	1076
———, nitrification in (DESAI, S. V. and FAZAL-UD-DIN).	777
———, rapid determination of moisture in (SEN, A.)	1076
———, single-value properties of (CHARLTON, J.)	1054
———, utilization of inorganic nitrogen during the decomposition of plant materials in the (SHRIKHANDE, J. G.)	767
———(cotton, black), nitrogen balance in (WAD, Y. D. and AURANGABADKAR, R. K.)	316
Soils of the Bombay Presidency, nitrogen recuperation in (SAHASRABUDDHE, D. L. and ABHYANKAR, V. S.)	268
———(paddy), decomposition of farmyard manure and sulphate of ammonia in (MUKERJI, B. K. and VISHNOI, S. L.)	17
———, of Bengal, biochemical study of (DE, P. K. and PAIN, A. K.)	746
———, organic nitrogen of (DE, P. K. and PAIN, A. K.)	1081
———(rice), fixation of nitrogen in, under water-logged conditions (DE, P. K.)	1237

	PAGE
Sorghum, anther, pollen and stigma in (RANGASWAMI AYYANGAR, G. N. and PANDURANGA RAO, V.)	1299
———, blight and hollow-stem of (UPPAL, B. N. <i>et al.</i>)	1323
———, inheritance of characters in, (RANGASWAMI AYYANGAR, G. N. <i>et al.</i>)	481, 938
——— × saccharum hybrid (JANAKI AMMAL, E. K. and SINGH, T. S. N.)	1105
South Africa Government, proclamation for the protection of the sugar-cane crops	878
SRINAGABHUSHANA (PATEL, B. S. and)—Fibre-properties of similar strains of cotton in different tracts	63
Standard errors of Mendelian ratios, tables of	878
Statistical notes for agricultural workers (BANERJEE, K. C. <i>et al.</i>)	1122
——— (BOSE, S. S. <i>et al.</i>)	1107
——— (CHAKRAVERTTI, S. C. <i>et al.</i>)	34
——— (KULKARNI, R. K. <i>et al.</i>)	460
Sticky point, moisture in soils at, and 'R' (CHARLTON, J.)	1054
Stigma in sorghum (RANGASWAMI AYYANGAR, G. N. and PANDURANGA RAO, V.)	1299
Storage of Dharwar cotton, influence on fibre-properties (NAYAK, H. R.)	52
Storage of fungal cultures (GALLOWAY, L. D.)	946
STUTTS, R. T. (McNAMARA, H. C. and)—A device for separating different lengths of fibres from seed cotton	1153
SUBRAMANIAM, L. S.—“Some New Seedling Diseases of Sugarcane”	11
SUBRAMONIA IYYAR, S. (SAYER, W. and)—Ideal size and shape of sugar-cane experimental plots	684
Sugarcane experimental plots, ideal size and shape of (SAYER, W. <i>et al.</i>)	684
———, factors that influence the error of field experiments with (SAYER, W. and KRISHNA IYER, P. V.)	917
——— juice, mineral matter in, and its effect on the recovery of white sugar (LANDER, P. E. and RAMJI NARAIN)	1218
———, some new seedling diseases of (SUBRAMANIAM, L. S.)	11
——— (saccharum) × sorghum hybrid (JANAKI AMMAL, E. K. and SINGH, T. S. N.)	1105
——— (<i>Saccharum spontaneum</i>), cyto-genetic analysis of (JANAKI AMMAL, E. K.)	1
——— (JANAKI AMMAL, E. K. and SINGH, T. S. N.)	9

	PAGE
Sugar (white), effect of mineral matter on the recovery of (LANDER, P.E. and RAMJI NARAIN)	1218
SUKHATME, P. V.—“An Illustration of the Use of the χ^2 -Technique of Analysis on Meteorological Data”	1292
Sulphate of ammonia, decomposition of, in the paddy-soils (MUKERJI, B. K. and VISHNOI, S. L.)	17
Sun, reduction of nitrates by the (FAZAL-UD-DIN)	844
Sweet potatoes, Rhizoctonia on, in Bombay (MUNDKUR, B. B.)	994

T

Temperature, influence of, on black pattern in the Desert Locust (AFZAL HUSAIN, M. and AHMAD, T.)	624
Tiller variation, studies in (BANERJEE, K. C. <i>et al.</i>)	1122
TIN, U (1).—“Developmental Variation in the Paddy Grain”	396
Titration curves of clay acids (MITRA, RAMPRASAD)	555
—————, interpretation of (MUKHERJEE, J. N. <i>et al.</i>)	517
Tobacco (see ‘ <i>Nicotiana Tabacum</i> ’)	828
Tolerance of wheat plants for chlorides of non-essential elements (SINGH, B. N. and PRASAD, S.)	720
Tonnage experiments with Co 205 and Co 213, ideal size and shape of experimental plots for (SAYER, W. <i>et al.</i>)	684
TREHAN, K. N. (AFZAL HUSAIN, M. and)—Studies on <i>Bemisia gossypiperda</i>	893
Trinidad, Imperial College of Tropical Agriculture, banana breeding at (CHEEMA, G. S. and BHAT, S. S.)	484

U

United Provinces rices, earliness in (SETHI, R. L. <i>et al.</i>)	361
—————, inheritance of earliness in (SETHI, R. L. <i>et al.</i>)	1246
————— (Western), classification of the autumn rices of (KASHI RAM and EKBOTE, R. B.)	930
UPPAL, B. N. and KAMAT, M. N.—“Gummosis of Citrus in Bombay”	803
————— and PATEL, M. K.—“A New Variety of <i>Oidiopsis taurica</i> ”	110
————— and WESTON, WM. H. (JR.).—“The Basis for Merging <i>Sclerospora indica</i> with <i>Scl. philippinensis</i> ”	715
—————; KOLHATKAR, K. G. and PATEL, M. K.—“Blight and Hollow-stem of Sorghum”	1323

V

VAIDYANATHAN, M. (SAYER, W. and)—Ideal size and shape of sugar-cane experimental plots	684
Variation (developmental), in paddy grain (TIN, U)	396

	PAGE
Variation (tiller), studies in (BANERJEE, K. C. <i>et al.</i>)	1122
VASUDEVA, R. S.—“Studies on the Root-rot Disease of Cotton in the Punjab, II. Some Studies in the Physiology of the Causal Fungi”	904
VERMA, P. M. (AFZAL HUSAIN, M. and)—Studies on <i>Bemisia gossypiperda</i>	893
Vermiform larvae of <i>Schistocerca gregaria</i> , factors determining the movement of (AFZAL HUSAIN, M. and BHATIA, D. R.)	665
VISHNOI, S. L. (MUKERJI, B. K. and)—Decomposition of farmyard manure and sulphate of ammonia in the paddy soils of the Central Provinces	17
<i>Vitis quadrangularis</i> , systematic position of the smut causing malformation of (MUNDKUR, B. B.)	876

W

WAD, YESHWANT D. and AURANGABADKAR, R. K.—“Nitrogen Balance in Black Cotton Soils in the Malwa Plateau, II. Changes during the Hot Weather”	316
Water-logged rice soils, fixation of nitrogen in (DE, P. K.)	1237
WESTON, WM. H. (JR.) (UPPAL, B. N. and)—Basis for merging <i>Sclerospora indica</i> with <i>Scl. philippinensis</i>	715
Wheat, brown rust attack on (PAL, B. P.)	127
——, flours and bread, methods of analysis and appreciation of (BORASIO, LUIGI)	866, 1134
Wheat plants, tolerance of, for chlorides of non-essential elements (SINGH, B. N. and PRASAD, S.)	720
White-fly of cotton, seasonal activities of, in the Punjab (AFZAL HUSAIN, M. <i>et al.</i>)	893
Wilt-resistance in <i>rahar</i> (<i>Cajanus indicus</i>), inheritance of (SHAW, F. J. F.)	139
Wither-tip disease of citrus (CHAUDHURI, H.)	75
Wool, why locusts eat it (AFZAL HUSAIN, M. and MATHUR, C. B.)	263

Z

<i>Zea Mays</i> , a disease of, caused by <i>Colletotrichum graminicolum</i> (CHOWDHURY, S. C.)	833
---	-----

